

Watch was kept by four observers from November 13^d 23^h $\frac{1}{2}$ to 14^d 2^h, and by one observer until 14^d 4^h. No *Leonids* were seen, although the weather was favourable.

From 14^d 20^h to 22^h 30^m watch was kept by one observer at intervals: from 15^d 0^h to 3^h continuously by three observers, and by four observers until 4^h $\frac{1}{2}$ (daylight). Clouds at frequent intervals throughout.

15^d 0^h 48^m. Moon rose from behind cloud.

15^d 1^h 35^m. Large amount of cloud in neighbourhood of radiant, rain falling heavily to northward. None fell at observatory.

15^d 1^h 45^m. Rain extending from north to west. Lunar rainbow developed during this shower.

Watch kept by two observers on 16th, and at intervals by one observer on November 17.

Initials: W., O., Or., P.=Messrs. Walter, N. V. Olivier, L. N. Olivier, and Piveteau.

*Observations of the Partial Eclipse of the Sun 1900 November 22
made in Western Australia.*

(Communicated by W. Ernest Cooke, Government Astronomer.)

The partial eclipse of the Sun was observed at the Perth Observatory, W.A., on 1900 November 22. Instrument 10-inch refractor.

G.M.T. of first contact November 21	h	m	s
	19	37	26.82
„ last „ „	22	06	38.28

The Moon's edge passed the first of two small spots at 19^h 52^m 50^s.28.

Observations of a solar blackened bulb and a dry bulb thermometer in a Stevenson's screen were taken at the observatory at Carnarvon, near Shark's Bay, and at a small island in Shark's Bay, as nearly as possible in the central path. These observations are enclosed herewith.

Photographs were also taken at various times during the eclipse. The negatives are preserved, but no special measurements have been made on them.

Greenwich Mean Time.	Perth Observatory.			Faure Island, Shark's Bay.			Carnarvon.		
	Solar Max. in Vacuo.	Dry Bulb.	Differ- ence.	Solar Max. in Vacuo.	Dry Bulb.	Differ- ence.	Solar Max. in Vacuo.	Dry Bulb.	Differ- ence.
h m	°	°	°				°	°	°
18 00	...	...	...	141°3	83°0	58°3	...	...	...
15	...	...	...	141°0	82°4	58°6	...	...	...
30	...	...	...	140°2	81°8	58°4	...	...	...
45	...	...	...	138°7	81°9	56°8	...	...	...
19 00	...	69°2	...	137°4	81°1	56°3	138°4	81°3	57°1
10	...	...	...	136°4	80°3	56°1	...	...	...
15	...	...	...	...	...	...	135°1	81°7	53°4
20	...	...	...	135°3	79°8	55°5	...	...	...
30	121°8	70°0	51°8	126°0	78°6	47°4	129°4	81°9	47°5
35	122°6	69°6	53°0	124°9	79°0	45°9	...	...	...
40	121°2	70°7	50°5	129°8	79°0	50°8	...	...	...
45	120°5	69°0	51°5	125°2	78°3	46°9	120°8	80°0	40°8
50	121°0	69°6	51°4	124°0	78°1	45°9	...	...	...
55	118°1	69°0	49°1	124°1	77°8	46°3	...	...	...
20 00	116°0	69°0	47°0	120°3	77°2	43°1	113°7	78°8	34°9
05	112°0	68°2	43°8	118°8	76°7	42°1	...	...	...
10	107°9	68°6	39°3	116°8	76°8	40°0	...	...	...
15	104°5	68°6	35°9	116°3	75°9	40°4	99°9	78°0	21°9
20	102°3	68°4	33°9	112°4	75°8	36°6	...	...	...
25	99°1	68°0	31°1	110°0	75°4	34°6	...	...	...
30	96°1	67°6	28°5	...	...	...	93°5	76°8	16°7
32	...	...	...	104°0	74°8	29°2	...	...	...
35	92°0	67°0	25°0	102°3	74°3	28°0	...	...	...
40	88°2	66°5	21°7	99°2	73°9	25°3	...	...	...
45	84°5	66°4	18°1	95°0	74°0	21°0	84°0	75°7	8°3
50	81°0	66°3	14°7	91°0	73°4	17°6	...	...	...
55	78°4	66°0	12°4	87°0	73°1	13°9	...	...	...
21 00	76°8	66°2	10°6	82°6	72°6	10°0	77°9	74°7	3°2
03	...	...	...	80°3	72°4	7°9	...	...	...
05	76°3	66°0	10°3	79°0	72°4	6°6	...	...	...
07	...	...	...	78°0	72°3	5°7	...	...	...
10	77°0	66°0	11°0	77°0	72°1	4°9	...	...	...
12	...	...	...	77°0	72°0	5°0	...	...	...
15	78°6	66°2	12°4	77°5	72°3	5°2	74°6	74°0	0°6
18	...	...	...	78°6	72°0	6°6	...	...	...
20	80°3	66°1	14°2	79°5	72°0	7°5	...	...	...
22	...	...	...	80°6	72°0	8°6	...	...	...

Greenwich Mean Time.	Perth Observatory.			Faure Island, Shark's Bay.			Carnarvon.		
	Solar Max. in Vacuo.	Dry Bulb.	Differ- ence.	Solar Max. in Vacuo.	Dry Bulb.	Differ- ence.	Solar Max. in Vacuo.	Dry Bulb.	Differ- ence.
h m									
21 25	83°0	66°0	17°0	82°3	72°1	10°2	...	...	...
27	...	...	...	84°0	72°0	12°0	...	...	...
30	85°7	66°0	19°7	85°7	71°8	13°9	77°0	74°0	3°0
33	...	...	...	87°2	72°0	15°2	...	...	...
35	88°1	66°0	22°1	88°7	71°9	16°8	...	...	...
38	...	...	...	90°2	72°0	18°0	...	...	...
40	90°7	66°4	24°3	91°5	72°0	19°5	...	...	...
42	...	...	...	92°3	72°0	20°3	...	...	...
45	91°8	66°4	25°4	93°9	72°1	21°8	80°0	74°0	6°0
47	...	...	...	94°7	72°2	22°5	...	...	...
50	93°0	66°3	26°7	96°0	72°2	23°8	...	...	...
52	...	...	...	96°4	72°0	24°4	...	...	...
55	93°2	66°2	27°0	97°2	71°8	25°4	...	...	...
57	...	...	...	98°0	72°0	26°0	...	...	...
22 00	93°4	66°1	27°3	98°3	71°7	26°6	91°8	74°0	17°8
02	...	...	...	98°6	71°6	27°0	...	...	...
05	93°1	66°1	27°0	98°6	71°6	27°0	...	...	...
07	...	...	...	98°8	71°4	27°4	...	...	...
10	92°1	66°0	26°1	98°2	71°2	27°0	...	...	...
12	...	...	...	98°0	71°2	26°8	...	...	...
15	...	...	...	97°4	71°1	26°3	82°3	73°8	8°5
20	...	...	...	95°6	71°0	24°6	...	...	...
25	...	...	...	93°1	70°7	22°4	...	...	...
30	...	...	...	90°2	70°3	19°9	...	...	...
35	...	...	...	86°7	70°3	16°4	73°5	72°7	0°8
38	...	...	...	83°7	70°3	13°4	...	...	...

Barometer, Faure Island, Shark's Bay. Height above M.S.L. about 25 feet.

G.M.T.	Uncorrected Baro.	Alt. Therm.	G.M.T.	Uncorrected Baro.	Alt. Therm.
h m	in.		h m	in.	
18 00	29°990	86°6	20 30	29°907	75°5
30	°980	85°7	21 00	°900	73°2
19 00	°952	84°0	30	°898	72°0
30	°936	82°0	22 00	°906	72°0
20 00	°925	79°8	30	°920	70°0

Wind fresh to strong, S.S.W. to W.S.W.

Position of Observing Stations.

			Latitude.	Longitude.
Perth Observatory	...	...	31° 57' S.	115° 51' E.
Faure Island, Shark's Bay	...	...	25 53	113 52
Carnarvon	...	...	24 54	113 39

Perth Observatory, W.A.:
1900 December 15.

Occultations of Jupiter and his Satellites, 1900 September 29,
observed at Windsor, New South Wales. By John Tebbutt.

This phenomenon was observed by me under very good conditions with the 8-inch equatorial refractor and a power of 74 diameters. The times of disappearance at the Moon's dark limb, which was well seen, were very satisfactorily observed. That part of the dark limb projected on the planet's disc was serrated in consequence of the lunar peaks, and appeared almost black by contrast. The disappearances of the satellites were, of course, not instantaneous, the times recorded being those at which the last rays vanished. Of the satellites, III. occupied about two seconds, I. about $1\frac{1}{2}$ second, II. about $1\frac{1}{4}$ second, and IV. about $1\frac{1}{2}$ second, in disappearing. Notwithstanding that the Moon's bright limb was steady and well defined, it was impossible to observe the actual reappearances of the satellites, the times being probably from one to two seconds late. Satellite IV. was very faint at the reappearance, and this phase for the planet's western limb was missed. The predicted phases for the planet had been kindly provided by Mr. C. J. Merfield, of Sydney. The following are the observed local sidereal and mean times of the phenomenon :—

			Sidereal Time.	Mean Time.
			<small>h m s</small>	<small>h m s</small>
Disappearance of Satellite III.	...	...	20 1 32.0	7 30 47.2
Contact of Planet's Western Limb	...	...	20 11 58.9	7 41 12.3
Disappearance of Planet's Eastern Limb	...	...	20 13 27.7	7 42 41.0
Disappearance of Satellite I.	...	...	20 15 39.1	7 44 52.0
Disappearance of Satellite II.	...	...	20 18 29.1	7 47 41.5
Disappearance of Satellite IV.	...	...	20 32 44.9	8 1 55.0
Reappearance of Satellite III.	...	...	21 9 35.7	8 38 39.7
Contact of Planet's Eastern Limb	...	...	21 18 21.6	8 47 24.3
Reappearance of Satellite I.	...	...	21 19 37.6	8 48 40.0
Reappearance of Satellite II.	...	...	21 22 5.1	8 51 7.1
Reappearance of Satellite IV.	...	...	21 31 48.1	9 0 48.5

Observatory, Peninsula, Windsor, N.S. Wales :
1900 November 23.